# CHAPTER II

# Lean Years

The years following World War I were famine years for the War Department, as the American people reverted to their traditional postwar custom of reducing a fighting army to a skeleton force. The war to end war had been fought and won. Disarmament, neutrality, and isolationism were widely accepted as desirable and attainable goals. The twenties, with their return to normalcy and balanced budgets, brought sharp retrenchment in military spending. The great depression of the thirties directed attention away from problems of national security to problems of national recovery. As the Army dwindled to virtual insignificance, the military plant decayed and military vision clouded. Efficiency was sacrificed to economy. Planning tended to become increasingly unrealistic. The Construction Service of the Quartermaster Corps, like most of the Army, suffered from the effects of governmental parsimony and public indifference.

The Construction Service labored under even crueler handicaps. As a subdivision of a multipurpose supply organization, it was at a serious disadvantage. Its chief, one of three brigadier generals in the Quartermaster Corps, was selected on the basis of seniority; no engineering background was required. "It was sometimes difficult," one construction officer recalled, "to get technical matters across to our superiors."[1] Maintaining a staff of technically competent officers was also difficult. Such men were often reluctant to serve in a corps which might assign them to wagon companies, remount depots, or graves registration duty; and the General Staff showed little inclination to place good officers in Quartermaster vacancies. Moreover, the status of the service was at times affected by the onus of criticism which attached to its wartime predecessor, and its future seemed filled with uncertainties. As the public works controversy waxed hotter, as powerful forces battled for high stakes, rumors periodically swept through the Construction Service: "The Engineers are going to grab us."[2]

That many problems could have been avoided by placing military construction under the Engineers is beyond doubt. A specialist corps, with a large continuing program of rivers, harbors, and flood control projects, and the chosen branch of most top West Point graduates, the Corps of Engineers was in a far more advantageous position than the Construction Service. But despite strong arguments in favor of a transfer, the compromise of 1920 endured for two decades, as circumstances combined to preserve the *status quo*.

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[1] Comments of Brig Gen Wilmot A. Danielson on MS, Constr in the United States, 1959, p. 55. Cited hereinafter as Danielson Comments.

[2] Interv with Miss Winnie W. Cox, 10 Sep 56.

*The Construction Service, 1920–1938*

When, on 15 July 1920, the Construction Division of the Army became the Construction Service of the Quartermaster Corps, the future appeared bright. For the first time in the Army's history, all military construction, except fortifications work, was centralized in one permanent organization. Also for the first time, on-the-job construction was centrally controlled, as Constructing Quartermasters reported directly to The Quartermaster General rather than to commanders in the field. Never before had the Quartermaster Corps been so rich in construction talent. Ninety officers of the wartime division accepted permanent commissions, and their ranks were swelled by the transfer of technically trained officers from other branches and the assignment of a number of fine Quartermaster Regulars to the Construction Service. A staff of highly competent civilians was an important legacy from General Marshall's organization. A 42.6-million-dollar program, comprising 139 projects, was on the books in mid-1920, and prospects for a large continuing program seemed good.[3] Authorized under the Defense Act of 1920 was a force of 280,000 men, over two and one-half times the size of the prewar Army.

Designed as a separate element of the Quartermaster Corps, the Construction Service was self-contained and distinctive. In the Washington office, three major divisions, Construction, Maintenance and Utilities, and Real Estate, were supported by Administrative, Fiscal, Legal, and Planning Branches. Recently established district headquarters at Washington, San Antonio, San Francisco, Honolulu, and Manila were independent of other Quartermaster field offices.[4] From mid-1920 through 1938, eleven Chiefs of Construction,[5] known unofficially as Constructing Quartermasters General, ruled over "a kingdom in itself." A companionable, close-knit group, the members of the service formed "a sort of club." The separation of construction from other Quartermaster activities was reinforced by a corps-wide policy announced in 1921. Recognizing "that the highest efficiency can only be attained by the training and development of specialists and the intelligent use of such specialists," the Acting Quartermaster General wrote: "Every effort should be made . . . to utilize to best advantage the services of specialists and in the lines in which they have specialized."[6]

The fortunes of the service suffered an early decline. The inauguration of President Harding ushered in an era of strictest economy in military spending. The enlisted strength of the Regular Army fell to 132,106 by July 1922 and to 118,348 a year later. Not until the mid-1930's would the strength exceed 130,000.[7] On 1 August 1921 Secretary of

[3] *Report of the Chief of the Construction Division, 1920* (Washington, 1920), p. 7.

[4] (1) OQMG Circ 11, 28 Jul 20. (2) OQMG Office Memo 119, 30 Aug 21. (3) Constr Div Office Order 312, 21 Jun 20.

[5] They were: Brig. Gen. John M. Carson, Col. Edward S. Walton (Acting), Brig. Gen. John T. Knight, Brig. Gen. Albert C. Dalton, Brig. Gen. M. Gray Zalinski, Brig. Gen. Arthur W. Yates, Brig. Gen. William S. Horton, Brig. Gen. Winthrop S. Wood, Brig. Gen. Louis H. Bash, Brig. Gen. Patrick W. Guiney, and Brig. Gen. A. Owen Seaman.

[6] OQMG Circ 20, 31 Oct 21.

[7] Mark Skinner Watson, *Chief of Staff: Prewar Plans and Preparations*, UNITED STATES ARMY IN WORLD WAR II (Washington, 1950), p. 16.

War John W. Weeks imposed a ceiling of $500 on expenditures which could be made on "any building or military post or grounds" without his approval.[8] Later that month he laid down the policy which would govern construction for the next six years: "No permanent construction will be undertaken where permanent construction can be postponed and only such repairs and temporary construction necessary will be considered."[9] From 1921 through 1926 funds voted for construction at military posts totaled $4,535,357, an average of but $755,893 per year. Most of this money went for a few big projects: Camp Benning, Georgia, and Camp Lewis, Washington; Edgewood Arsenal in Maryland; the disciplinary barracks at Fort Leavenworth, Kansas; a reservoir and a refrigeration plant for the Hawaiian garrison; and a large warehouse at Gatun, Canal Zone. During this same period, $4,725,760 was appropriated for construction and repair of hospitals. The total provided for maintenance and utilities in these years, $29,452,217, though comparatively large, was woefully inadequate for the tasks at hand.[10]

Meantime, Weeks was moving to divest the Army of surplus war properties. He placed nine camps and cantonments built in 1917 and 1918 in caretaking status to be used as training grounds for the nine corps areas;[11] he selected five special cantonments constructed late in the war as permanent "homes" for various branches;[12] and he retained Aberdeen Proving Ground, Edgewood Arsenal, eight airfields, two general hospitals, and several dozen other installations.[13] The rest of the huge wartime military plant was slated to go. Factories would be auctioned off; cantonments, salvaged; and land, leased or sold. During fiscal year 1923, Maj. Napoleon W. Riley, chief of the Real Estate Division, Construction Service, cleared $3.5 million through sales and negotiated leases which would bring in rentals totaling nearly $1 million a year. Riley co-ordinated his work with the Office of the Director of Sales, which Major Hartman headed from 1922 to 1924.[14] Maj. Merrill D. Wheeler, who succeeded Riley in 1924, was to conduct more extensive "mopping up" operations involving larger blocks of real estate.

Maintenance, rather than new construction, constituted the principal work of the service in the early 1920's. As the Army fell back on its permanent installations, the Quartermaster Corps faced an immense task of upkeep and repair. Heading the maintenance organization during the Harding administration, Capt. William Cassidy and Maj. Wilmot A. Danielson faced what was described as

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[8] WD GO 36, 1 Aug 21.

[9] Ltr, TAG to Chiefs of Brs, 26 Aug 21. 600.1 Part 1.

[10] Summary of Appns, Constr Div OQMG, 1920–40, 13 Sep 41. EHD Files. Cited hereinafter as Summary of Appns, 1920–40.

[11] These corps area training centers were: Devens, Mass. (First); Dix, N.J. (Second); Meade, Md. (Third); McClellan, Ala. (Fourth); Knox, Ky. (Fifth); Custer, Mich. (Sixth); Funston, Kans. (Seventh); Travis, Tex. (Eighth); and Lewis, Wash. (Ninth).

[12] These were: Humphreys, Va., renamed Belvoir (Engineers); Vail, N.J., renamed Monmouth (Signal Corps); Eustis, Va. (Railway Artillery); Bragg, N.C. (Field Artillery); and Benning, Ga. (Infantry).

[13] The airfields were: Brooks and Kelly, Tex.; Chanute and Scott, Ill.; Langley, Va.; March, Calif.; Mitchel, N.Y.; and Selfridge, Mich. The hospitals were: Fitzsimmons General Hospital at Denver, Colo., and Beaumont General Hospital at El Paso, Tex.

[14] Incl with Memo, Riley for Chief Constr Serv, 15 Oct 23. QM020 (Constr) 1921–39.

"the worst headache in the Army."[15] Under their care were more than 150 reservations, many dating from the earliest days of the nation's history and most encumbered with temporary wartime structures. Standard building and engineering practice indicated a yearly sum for maintenance equivalent to 3 percent of the appraised value of permanent structures and to 8 percent of temporary. Yet in 1922 appropriations amounted to only 1.5 percent and in 1923 to but 0.82. Post quartermasters did their best to stretch meager budgets by using salvaged materials and employing troops as repairmen and custodians. But with insufficient funds, they fought a losing battle. The backlog of deferred maintenance averaged approximately $10 million a year.[16]

It was in these years that a start was made toward modernizing the military plant. Developing a plan for updating life on Army posts, Cassidy and Danielson pushed determinedly ahead. Automation was ushered in with the introduction of pressure switch controls for pumping plants and thermostats for heating systems. Installation of an electric ice box in the Chief of Staff's quarters at Fort Myer marked the beginning of home refrigeration in the Army. Electric ranges began to replace old-time coal cookstoves. When funds were lacking, the Quartermaster officers resorted to stratagems.[17] Recalling the method by which natural gas was brought to several reservations, Danielson wrote:

> One of my first duties on reporting in Washington . . . in the fall of 1921 was to negotiate a gas contract for Kelly Field and Normoyle at San Antonio. To use natural gas required, of course, a distribution system. No funds for this were available. To overcome this we estimated the cost of the distribution system and added 10 cents a thousand to the contract price of 30 cents for the gas, making 40 cents total until the distribution system had been paid out. . . . This plan was used in getting natural gas to Fort Sill and Fort Riley.

A somewhat different plan was used at Fort Leavenworth, where a right-of-way concession served as the *quid pro quo* for "a contract at a reasonable rate." Thus, the wartime pattern was reversed, as the Construction Service struggled to make a dime look like a dollar.[18]

Retrenchment forced major readjustments in the construction setup. As the volume of new work diminished, district offices were abandoned, and the staff in Washington was reduced. By late 1923 the Construction Service had only twenty-four officers, thirteen of whom were CQM's.[19] In 1924 The Quartermaster General reported only one project "of any magnitude," a hospital wing and a cluster of officers quarters at Fort Benning, Georgia.[20] Surplus construction officers received other Quartermaster duties. Men trained as architects and engineers found themselves commanding wagon companies, administering depots, and serving as post QM's. Specialization went out the window, as emphasis shifted to the development of "all-around quartermasters."[21]

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[15] Cox Interv, 10 Sep 56.

[16] (1) WD Ltr AG 600.15 (1-9-23) Misc M-D, 12 Jan 23. QM 600.3 (Misc) 1922-31. (2) Annual Rpt of TQMG, 1923, pp. 4-5. QM 319.1. (3) Memo, G-4 for CofS, 20 Jul 25. AG 319.12 (8-21-25).

[17] Elizabeth C. Ryder, History of the Evolution of Repairs and Utilities (MS), 1958, Secs 2, 6, 7. EHD Files.

[18] Danielson Comments, pp. 4-6.

[19] (1) OQMG Circ 21, 30 Nov 21. (2) Memo, OQMG for ASW, 16 Nov 23. QM 210.321 1923.

[20] Ltr, TQMG to TAG, 4 Sep 24. QM 319.1.

[21] Memo, OQMG (Maj M. R. Wainer) for TQMG, 13 Oct 22. QM 210.321 1922.

The organization inherited from General Marshall deteriorated sadly. Morale dipped. Some gave up in disgust. A dedicated few fought to prevent further losses. When Major Danielson talked of transferring to the Corps of Engineers, his brother officers persuaded him to stay. Conditions, they told him, were bound to improve.[22]

A turning point came in the mid-1920's, when living conditions at Army posts became a topic of wide concern. As early as May 1923, commenting on housing at Fort Belvoir, Virginia, the Chief of Engineers, General Beach, advised The Quartermaster General:

> Present temporary buildings are rapidly approaching the end of their usefulness as habitable shelter. Maintenance cost by constant repair is prohibitive. Considering the delapidated condition of these buildings, money spent for repairs, while an immediate necessity, is beyond a doubt uneconomical and each year of delayed replacement by permanent construction adds to what is considered a waste of Government funds.[23]

A few months later The Inspector General pointed out that temporary wartime structures were "becoming unfit and unsafe for occupancy."[24] Early in 1924, when an officer publicly stated that posts in the Second Corps Area were "rotting away" and told how soldiers at Governors Island fished for driftwood to repair flooring, the story made the front page of the New York *Times*.[25] In his annual report for 1924 Secretary Weeks disclosed that 40,000 men were living under "unsuitable" conditions.[26] Leading periodicals took up the theme, featuring articles with such titles as "Our Homeless Army" and "Army Housing: A National Disgrace."[27]

By the fall of 1924 Weeks was prepared to offer a long-range building program to Congress. Two plans had been submitted by Constructing Quartermaster General Knight. Both were based on an Army of 150,000 men, and both were relatively modest. The first made use of virtually all existing posts; the second concentrated troops at a few large reservations and provided for the abandonment of surplus installations. Although the General Staff preferred the second plan, practical considerations compelled it to choose the first. As G–4 advised the Chief of Staff: "Difficulty has always been experienced in securing the necessary authority to dispose of old Army posts due to the fact that adjoining communities through their Congressmen have raised such strong objections to having the garrison taken away." There was another important consideration: the first plan would cost $10 million less than the second.[28]

The program presented to Congress contemplated the expenditure of $110 million over a 10-year period. To alleviate miserable living conditions was the main objective. Permanent barracks, quarters, and hospitals would replace ramshackle wartime structures. Water and sewage systems would be modern-

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[22] Danielson Comments, p. 55.

[23] Ltr, CofEngrs to TQMG, 28 May 23. 600.1 Part 1.

[24] Ltr, TIG to SW, 10 Sep 23. AG 319.12 (9–31–23).

[25] New York *Times*, February 26, 1924, pp. 1, 10. © 1924 by The New York Times Company. Reprinted by permission.

[26] *Report of the Secretary of War, 1924* (Washington, 1924), p. 16ff.

[27] (1) *Outlook*, vol. 142, no. 5 (February 3, 1926), pp. 178–80. (2) *The Literary Digest*, November 5, 1927, pp. 10–11.

[28] Memo, G–4 for CofS, 18 Oct 24. G–4/14958.

CHANUTE FIELD, ILLINOIS, *1923, showing dilapidated condition of World War I temporary structures.*

ized, and up-to-date heating and cold storage plants would be provided. Later on, if funds permitted, hangars, vehicle storage, and warehousing would be constructed. The Quartermaster General came up with a scheme for financing the program. Since the end of the war, he had transferred to other departments or sold over $90 million worth of surplus military real estate. The War Department had received nothing whatever from these transactions. The Quartermaster General asked that proceeds from future sales go into a fund to be used for permanent construction.[29]

[29] G–4/14958.

In 1926 Congress loosened the purse strings slightly. The Quartermaster General received his permanent construction fund, together with authority to spend $7 million during the coming year. The total made available for new construction in 1926 topped the $8 million mark for the first time since the war. Appropriations for maintenance, repairs, and utilities, the so-called barracks and quarters funds, amounted to nearly $14 million, almost $10 million more than the figure for the previous year. The sum for construction and repair of hospitals remained as before, between $400,000 and $500,000. Recognizing another urgent

requirement, Congress approved a 5-year air expansion program, calling for increases in personnel and planes. Funds for construction of runways, hangars, fueling systems, and other Air Corps facilities were promised for 1927. Still another commission was given to the Quartermaster Corps: to design the approaches and conduct the architectural competition for the Tomb of the Unknown Soldier in Arlington National Cemetery.[30]

With a sizable sum of money in hand and the expectation of more to come, The Quartermaster General, Maj. Gen. B. Frank Cheatham, launched a comprehensive plan for post development. At the time, few reservations were places of beauty. As one architect observed, barracks and quarters were often "arranged in monotonous rows close together, with little privacy, with no outlook or setting, utterly unattractive."[31] Cheatham's architectural staff was second to none in Washington. Headed by Lt. Col. Francis B. Wheaton, formerly with McKim, Meade & White, it included Luther M. Leisenring, a graduate of the University of Pennsylvania and a former associate of Cass Gilbert; 1st Lt. Howard B. Nurse, a graduate of Mechanics Institute who had practiced in Rochester, New York; and a number of other fine professionals. Although cost would be an important factor in the drafting of new plans, the attitude of Wheaton's group was expressed by Nurse, who quoted a passage from Ruskin: "You may have thought that beauty is expensive. You are wrong—it is ugliness that costs."[32] The Quartermaster architects produced designs in keeping with American tradition and regional character: Georgian for the Atlantic seaboard, French Provincial for Louisiana, and Spanish Mission for the Southwest. To help lay out the projects, they called in nationally known city planners as consultants. Their goal, as Cheatham defined it, was "a deviation from the set type of military post."[33]

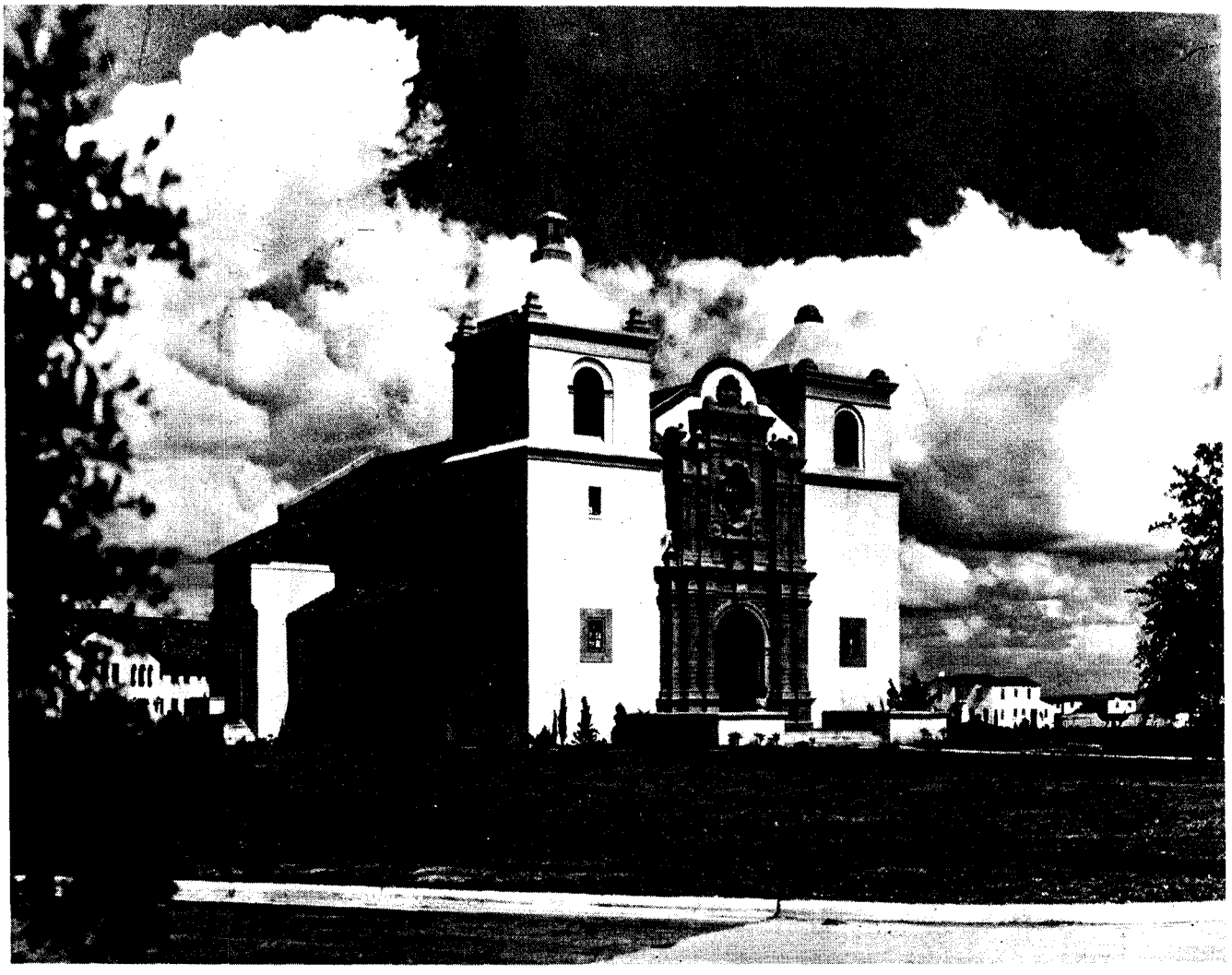
In carrying out the 10-year program, the Construction Service was handicapped by a shortage of officers. To be sure, there were more than enough qualified men within the Quartermaster Corps to handle the load. But relatively few were available for construction duty. Most were performing other Quartermaster tasks, serving on staffs, or attending school. The so-called Manchu Law, under which no officer below the rank of general could remain in Washington longer than four years, made a bad situation worse. When Lt. Col. Henry R. Casey, the key man in the Washington office was due to leave, Constructing Quartermaster General Dalton managed to keep him on by means of a "field" assignment to the Washington QM Depot. When Capt. Phillips H. Mallory, chief of the maintenance division, was "Manchued" out, Dalton summoned Danielson from Boston, where he was completing work toward a master's degree at MIT. Only with difficulty could Constructing

[30] (1) 44 *Stat.* 302, 264, 783, 914. (2) Summary of Appns, 1920–40. (3) *Report of the Secretary of War, 1926* (Washington, 1926), pp. 33–36.

[31] George B. Ford, "New Army Posts for Old," *The Quartermaster Review*, November–December 1929, p. 19.

[32] 1st Lt. Howard B. Nurse, "The Planning of Army Posts," *The Quartermaster Review*, September–October 1928, p. 15.

[33] Annual Rpt of TQMG, 1927, pp. 67–69. AG 319.12.

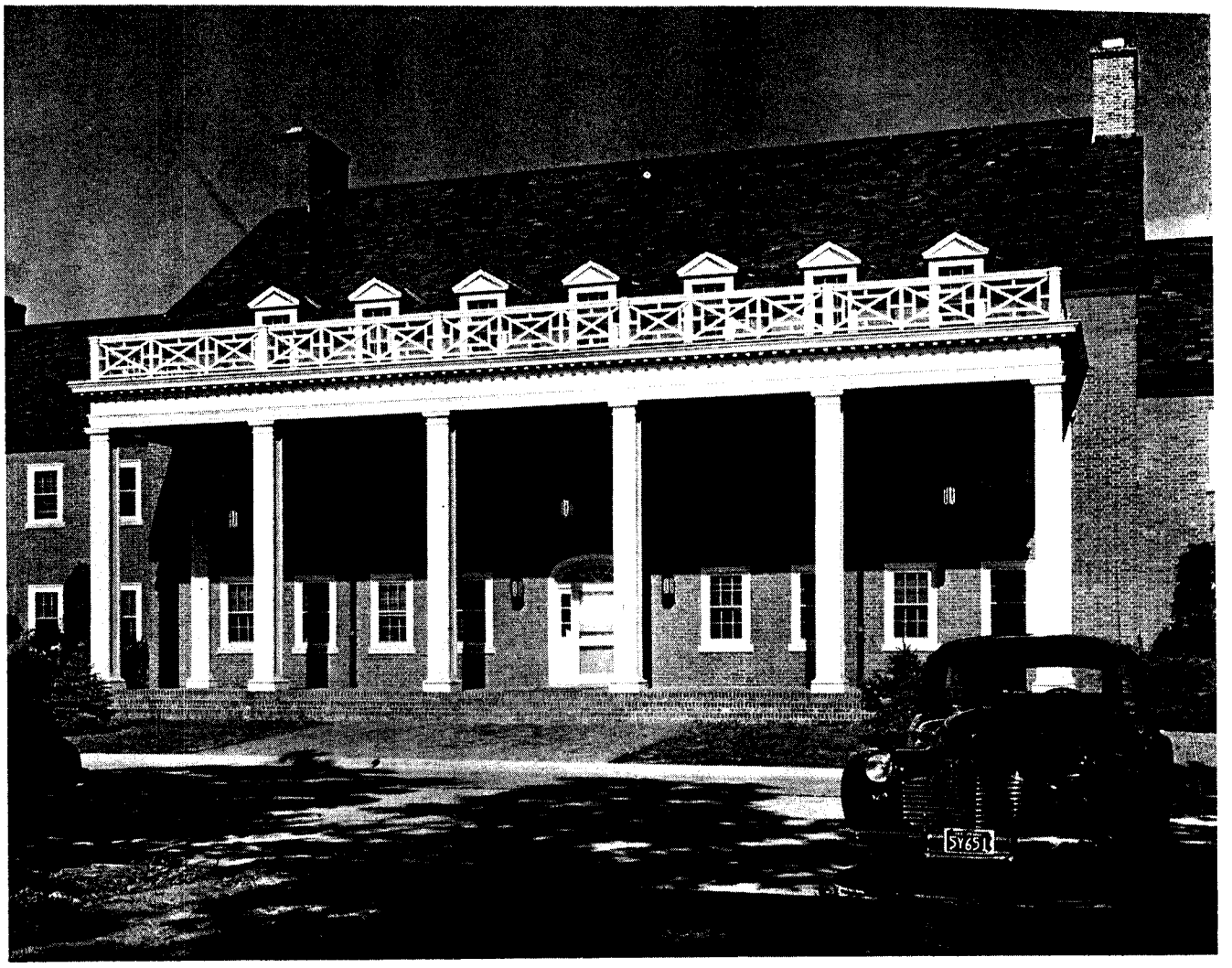


POST CHAPEL, RANDOLPH FIELD, TEXAS

Quartermasters be found for the growing number of projects. Fortunately, some good officers were available, among them Capts. George E. Lamb and Elmer G. Thomas, both veterans of the wartime division; Maj. John D. Kilpatrick, holder of two engineering degrees from Princeton University; and Capt. George F. Hobson, a graduate of MIT. But the ranks were too thin. General Cheatham had to recommend that commanding officers act as CQM's at Aberdeen Proving Ground and two Ordnance depots.[34]

[34] QM 210.321.

As the program expanded, pleasing vistas opened before the "homeless Army." Handsome masonry buildings began to replace the unsightly tempos of World War I. Telephones, oil burners, automatic stokers, storm doors, screens, and lighted streets enhanced the amenities of life on reservations. The new Air Corps stations were to be showplace installations. New medical facilities would be the last word in hospital design. These innovations and improvements sparked a sprucing-up campaign. Station commanders started nurseries and promoted the planting of trees and shrubs. Garden



OFFICERS' CLUB, FORT BELVOIR, VIRGINIA

clubs sprang up at almost every post. A ladies' committee, headed by Mrs. Cheatham, assisted with the decor of family quarters. The large, well-planned, permanent posts, with their fine buildings and attractive landscapes, were a source of pride to the Army. Fort Belvoir, Virginia, with its colonnaded structures spread out along ridges overlooking the Potomac, and Randolph Field, Texas, with its gleaming Mission architecture and imposing grounds, were particularly striking. The program aroused considerable enthusiasm and won the strong support of Secretary of War Dwight F. Davis. The attitude of Congress was favorable; from 1926 through 1930 it voted approximately $126 million for the Construction Service.[35]

Large-scale construction at permanent posts, major airfield projects, modern hospital wards and clinics, the Wright Brothers Memorial at Kitty Hawk, North Carolina, restoration of the Lee Mansion at Arlington, Virginia, a group of massive buildings at the U.S. Military Acad-

[35] (1) Annual Rpts of TQMG, 1927–30. QM 319.1. (2) Ltr, Chief Constr Serv OQMG to TAG, 5 Nov 28. QM 618.34 (Gen). (3) Summary of Appns, 1920–40.

emy—each new assignment added to the strain. The officers of the Construction Service were aging, and few young men were being trained to fill their shoes. Since the war, second lieutenants had shown little interest in Quartermaster careers. In the spring of 1928 General Cheatham had only five on his rolls, although he was authorized forty-two. A hard core of "old guard" construction officers—men like Danielson, Hartman, Nurse, and Thomas—endeavored to hold the line. CQM and Vicinity offices, each having jurisdiction over a wide area, were established in major cities. Civilians filled key posts in the Washington office. When Colonel Wheaton retired in the late 1920's, Leisenring took over as supervising architect. Another mainstay of the organization was Joseph A. Bayer, who administered fiscal activities for nearly twenty years. Increasingly, Cheatham felt the need for an "automatic supply of second lieutenants." Determined to meet this need, he set out to get what the Quartermaster Corps had never had before, men from West Point graduating classes.[36]

Arguing before the General Staff for a "fair share of the intelligent and well educated young officers who enter the Army," Cheatham won his case. Each year a few vacancies in the Quartermaster Corps would be open to Academy graduates.[37] But recruitment proved difficult. The attitude of the faculty was discouraging; one instructor asked a cadet if he wished to spend his life buying groceries and issuing shoes. On several visits to West Point, General Cheatham spoke to the first classmen, stressing the advantages of a Quartermaster career. In response to his appeals, three members of the class of 1929—Everett C. Hayden, Elmer E. Kirkpatrick, and Clarence Renshaw—joined the Construction Service. Assigned to West Point in the summer of 1929 as CQM for the new million-dollar project there, Hartman assumed the role of talent scout. During his 5-year stay at the Academy, he helped guide a score of graduates into military construction.[38] Cheatham and his successor, Maj. Gen. John L. DeWitt, arranged for ten of these "boys" to take degrees at leading engineering schools. Hopes for the future depended heavily on these young careerists.

With Brig. Gen. Louis H. Bash, the unusually able and forceful officer who was Chief of Construction from 1929 to 1933, DeWitt took further steps to strengthen the organization. He revived specialization, classifying construction officers as such and restricting them to their specialty. Years later he explained, "I always operated on the theory that a Jack-of-all-trades is master of none." More new blood was infused into the Construction Service. DeWitt personally combed the files in The Adjutant General's office, looking for likely candidates, men with superior ratings and technical qualifications, who might be detailed to the Quartermaster Corps.[39] About a dozen officers, including five with engineering degrees, came into the Service in this way. Meanwhile, Bash and his

[36] Ltr, Cheatham to TAG, 10 Mar 28. QM 210.321 (Asgmts) 1928.

[37] *Ibid.*

[38] (1) Intervs with M. Scott Dickson, 10 Jul 61; Brig Gen Clarence Renshaw, 13 Feb 59; Brig Gen Christian F. Dreyer, 27 Feb 59. (2) Ltr, Hartman to DeWitt, 16 Jun 31. QM 210.321.

[39] (1) Interv with Gen John L. DeWitt, 10 Apr 57. See also WD Ltr AG 201.6 (1-12-33) Misc M, 17 Jan 33.

assistants were also on the lookout for good men. Among the outstanding officers they recruited were 1st Lt. Kester L. Hastings and Maj. Hugo E. Pitz. A 1918 West Point graduate, Hastings was destined to become The Quartermaster General. Pitz, a 1904 graduate of Rensselaer Poly, was to be a key figure in construction during the 1930's—"a human dynamo who kept the train on the track," one associate described him.[40] A noteworthy change made by DeWitt and Bash in 1930 was the revival of the name Construction Division—a change which served to remind construction officers of the wartime accomplishment.

As the economic crisis deepened, as the volume of construction in the United States fell from $13.9 billion in 1929 to $5.7 billion in 1932, Congress voted modest increases in Army building funds. In the last three years of the Hoover administration, approximately $100 million, roughly half of it for new construction, became available to Bash's organization. The landmark legislation approved on 21 July 1932, the Emergency Relief and Construction Act, set aside more than $15 million for housing at Army posts. A program comprising some sixty projects, including million-dollar jobs at Barksdale, Langley, and Maxwell Fields, went forward during the early years of the depression.[41] Revitalized and strengthened by DeWitt and Bash, the Construction Division took this work in stride. Recalling the organization as it was in February 1933, when Bash succeeded him as The Quartermaster General, DeWitt stated: "There were no weaknesses that I know of. We did a good job."[42]

With the advent of the New Deal, the situation changed radically. Assuring the "host of unemployed citizens" that first things would come first, and calling for "action now," President Roosevelt declared in his inaugural address: "Our greatest primary task is to put people to work." At the same time he pledged his administration to reducing the cost of government and to "making income balance outgo."[43] The military appropriation act approved on 4 March 1933, the same day Roosevelt took office, provided $12 million for routine maintenance but no new money for Army housing. Before the month was out, directives reached the War Department severely restricting expenditures and impounding construction money appropriated under Hoover. The first "Hundred Days" of the new administration produced the Civilian Conservation Corps (CCC) and the Public Works Administration (PWA), both designed to created useful employment for the jobless. The Army came into the picture when Roosevelt ordered it to have 250,000 young men in the forests by early summer and when the Chief of Staff, General Douglas MacArthur, requested a large sum of PWA construction money.[44]

For the first time since the war, the Construction Division faced an emergency. Fourteen hundred CCC camps

[40] Dreyer Interv, 27 Feb 59.

[41] (1) Summary of Appns, 1920–40. (2) 47 *Stat.* 716. (3) Annual Rpt of TQMG, 1933, pp. 52–55. QM 319.1.

[42] DeWitt Interv, 10 Apr 57.

[43] H Doc 218, 87th Cong, 1st sess, *Inaugural Addresses of the Presidents of the United States*, pp. 236–37.

[44] (1) Annual Rpt of TQMG, 1933, pp. 62, 59. (2) Annual Rpt of the CofS, 1933. In *Report of the Secretary of War to the President, 1933* (Washington, 1933), pp. 15–16, 19.

to be ready by July, plus plans for spending $135 million in PWA funds asked for by the Chief of Staff—such was the task confronting the Constructing Quartermaster General, Brig. Gen. Patrick W. Guiney, and his principal assistant, Colonel Pitz, in the spring of 1933. With more than 13,000,000 people out of work, speed was "paramount" and time was "the dominant consideration." "Everything had to be done before it was started," Danielson recalled.[45] Part of the load was lifted from Guiney's shoulders, when CCC construction was decentralized to the corps area commanders, who surmounted the crisis by calling up Reserve officers and housing the enrollees, temporarily, in tents. The burden was lightened still further, when the Army allotment under the 3.3-billion-dollar PWA program was pared to $61.4 million, less than half the sum MacArthur had requested. Even so, the undertaking was several times larger and far more urgent than anything attempted since 1918.[46]

The situation demanded extraordinary measures. Responding to the President's call for action, Guiney and Pitz hastened to enlarge their organization, freeze designs, and place construction under way. They hired more civilian engineers. They rounded up every available officer with construction experience, including Danielson and Hartman, who came to Washington to help direct the effort. They issued standard blueprints, instructed CQM's to brook no interference by corps area and post commanders, and persuaded the Secretary of War to notify the field: "Time is not available for any extensive effort toward creating designs, drawing new plans, or effecting variations in plans already proven to be satisfactory."[47] They made a good record. Within a 40-week span, they awarded contracts totaling $47.5 million, launched purchase and hire jobs with a total estimated cost of $10.8 million, and put more than 11,000 persons to work. Projects undertaken with PWA funds included extensive construction at Aberdeen Proving Ground, a photolithographic plant at Fort Belvoir, a riding hall at Fort Myer, a chapel at Fort Meade, and needed improvements at several dozen other posts.[48]

An experiment designed to tide the needy over the winter of 1933–34 pointed work relief in another direction. Less businesslike than Interior Secretary Harold L. Ickes' PWA, but a good deal faster, was the Civil Works Administration (CWA), set up under Harry L. Hopkins in the fall of 1933. With a billion dollars transferred by the President from PWA, Hopkins created jobs for 4,000,000 people in thirty days. Participating in this program, the Construction Division had its first experience with "make work" projects. In a few months, the division spent $24.3 million at 265 posts, cemeteries, and Guard camps to employ 55,000 men. The bulk of the money went for wages and virtually all the work was of a pick and shovel variety: improving drainage, grading roads, and the like.[49] Although CWA

[45] (1) WD Ltr AG 600.12 IR (5–19–33) Misc M–D, 9 Jun 33. (2) Danielson Comments, p. 26.

[46] Annual Rpt of TQMG, 1934, pp. 20, 25. QM 319.1.

[47] WD Ltr AG 600.12 IR (5–19–33) Misc M–D, 9 Jun 33.

[48] (1) QM 210.321. (2) Annual Rpt of TQMG, 1934, p. 20. (3) 1st Ind, 9 May 34, on Memo, G–4 for TQMG, 4 May 34. QM 600.1 (Public Works).

[49] Annual Rpt of TQMG, 1934, pp. 20–21.

TABLE 3—APPROPRIATIONS FOR MAINTENANCE AND REPAIRS

| Year | Appropriated | Percent of Appraised Valuation | Estimated Requirement |
|---|---|---|---|
| 1934 | $2,444,003 | 0.65 | $13,290,448 |
| 1935 | 1,670,364 | 0.39 | 12,715,152 |
| 1936 | 2,465,185 | 0.61 | 19,604,580 |

*Source:* Incl with Memo, G–4 for TQMG, 8 May 36. QM 600.3 (Misc) 1941.

passed from the scene in early 1934, more and more money flowed into this type of activity, as first the Federal Works Administration (FWA) and later the Works Progress Administration (WPA) organized so-called "leaf-raking" projects in virtually every community. Meantime, the flow of PWA funds slowed to a trickle and appropriations for military construction all but ceased.

The Army housing and Air Corps programs, begun so hopefully in the late 1920's, came to a halt and maintenance funds dwindled almost to the vanishing point. From 1934 through 1936 only $14 million was appropriated for military construction, and nearly $10 million of this sum was for buildings at West Point and for Hickam Field, Hawaii. The Wilcox Act, passed in 1935, authorized construction of five strategic air bases in the United States and Alaska and two major air depots, one in the southeast and one in the Rocky Mountain area, but no funds were voted for this work until 1937, when Congress made available $8.8 million. Appropriations for maintenance and repairs hit bottom during this period.[50] (*Table 3*) FWA and WPA funds—$5 million in 1934, $19 million in 1935, and $28 million in 1936—were the chief reliance; but, because most of the money had to be spent for wages and much of the labor was unskilled, the Construction Division received a low return for its relief dollars. An increase in the enlisted strength of the Army to 153,212 in 1936 led to serious overcrowding. Men were housed in stables, attics, and gymnasiums; and at Carlisle Barracks prisoners were confined in a Hessian guardhouse dating from the Revolution. Without proper maintenance, the military plant became more and more dilapidated.[51] Recalling living conditions at run-down Army posts, one high-ranking officer declared: "We reached a situation where, at times, an umbrella inside the house was as useful as one outside."[52]

Appeals for an end to made work and a resumption of constructive effort were bootless. Year after year The Quartermaster General drew up realistic estimates based on the Army's needs. Year after year the Bureau of the Budget turned thumbs down, with a repetition of the set phrase, "not in accord with the program of the President." Mean-

[50] Incl with Memo, G–4 for TQMG, 8 May 36. QM 600.3 (Misc) 1941.

[51] (1) Summary of PWA and Work Relief Funds Available to OQMG, FY's 1934–40. Opns Br Files, S.3 (WPA). (2) G–4/30552.

[52] Testimony of Gen G. C. Marshall, 5 Aug 40. In S Subcomm of the Comm on Appns, 76th Cong, 3d sess, *Hearings* on H R 10263, p. 6.

while, the construction industry pushed a campaign of militant opposition to WPA. In a speech to the annual convention of the AGC early in 1936, President William A. Klinger presented the industry's "viewpoint of recovery economics":[53]

> The basic principle of priming the pump is to put the water into the pump. This can't be done by taking a bucket of water and spilling it over the pump, letting the great bulk of the water waste itself in holes in the ground . . . . A pump cannot be primed by men that know nothing about the pump that is to be primed. It cannot be primed by a Social Welfare worker . . . . It must be done by somebody who knows something about the industry to be used as the primer.[54]

But the industry's thrusts had little effect. When Danielson's assistant, Lt. M. Scott Dickson, a personal friend of Hopkins', called on the WPA administrator for help in accomplishing new construction projects, Hopkins told him: "I don't give a damn about your projects. I just want to put men to work. I don't give a damn if they dig a hole one day and fill it up the next. I want them working."[55]

As international tensions mounted after 1936, as the Army was augmented to 165,000 in 1937 and to 170,000 in 1938, continued efforts were made to resume the military construction program suspended in 1933. Colonel Pitz developed a plan for spending $162 million over a period of years. Colonel Hartman, as chief of the Construction Branch, G–4, led the movement to put the plan across. When the Bureau of the Budget withheld approval, the Chairmen of the Military Affairs Committees, Senator Morris Sheppard and Representative Lister Hill, took a hand. The result was an act approved on 26 August 1937, authorizing the appropriation of $25.5 million to be spent at forty-six posts and stations. This authorization helped pave the way for a twelve-million-dollar appropriation on 11 June 1938. The first big break came ten days later, when President Roosevelt agreed to give the Construction Division $65 million—$50 million in PWA funds and $15 million in WPA money—on condition that contracts be let and work started by 15 August.[56]

At this point a new obstacle arose in the person of the Constructing Quartermaster General, Brig. Gen. A. Owen Seaman, who declined to accept the money on the President's terms. An officer with thirty-eight years' service and good political connections, Seaman had succeeded General Guiney upon the latter's death in December 1936. The appointment had been made over the opposition of construction officers who favored Danielson for the post. Peppery and unpredictable, Seaman had antagonized the General Staff, and his refusal to take the proferred funds exasperated the Chief of Staff, General Malin Craig. Sending for The Quartermaster General, Maj. Gen. Henry Gibbins, Craig arranged to "sidetrack" Seaman. On 21 June, the day the

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[53] (1) Ltr, BOB to SW, 25 Jan 36. G–4/30552 Sec II. (2) WD Ltr AG 600.12 (5–1–37) Misc M–D, 4 May 37. (3) Memo, G–4 for CofS, 20 Jan 38. G–4/30552 Sec IV. (4) *The Constructor*, March 1936, p. 11.

[54] *The Constructor*, April 1936, pp. 5–6.

[55] Dickson Interv, 10 Jul 1961.

[56] (1) G–4/30552 Sec III. (2) 50 *Stat.* 857. (3) 52 *Stat.* 651. (4) Ltr, Roosevelt to Ickes, 21 Jun 38. AG 600.12 IR (3–11–33) Sec ID. (5) Memo, G–4 for TQMG, 11 Aug 38. QM 600.1 (Public Works) 1938.

money became available, Colonel Hartman became executive officer of the Construction Division with full authority to see that the President's wishes were carried out.[57] Of this assignment Hartman later wrote:

> I was ordered by the Chief of Staff to report to The Quartermaster General with instructions to assume full charge of the Construction Division to carry out the program. General Seaman remained in the office without authority and acted on all papers subject to my approval. This was a most embarrassing situation since I was then a colonel and his junior by some ten years.[58]

Despite his awkward situation, Hartman had the program under way by 15 August.[59] His subsequent success was but one of many achieved by the Construction Division.

With but half a billion dollars to spend over a 19-year span, the division did a remarkable job, providing permanent housing for 75,000 officers and men, erecting more than a dozen modern Air Corps stations, enlarging older general hospitals and building several new ones, constructing schools, laboratories, depots, and memorials, and updating the military plant. High quality at low cost was the Quartermaster hallmark. An annual prize awarded by the Association of Federal Architects went to the Construction Division three years out of six. Overhead generally ran well below 7 percent. Looking back over the lean years of the 1920's and 1930's, one long-time Quartermaster officer reflected:

> I feel confident that that loyal group of hard-working, experienced, competent, and efficient men and women inwardly glow with a fierce pride and take great pleasure in the accomplishments of the Construction Division of which they were a part. They can point with justifiable pride to the beautiful monumental buildings at the United States Military Academy at West Point and to the unobtrusive grandeur and beauty of the Memorial Amphitheater and Unknown Soldier's Tomb at Arlington. Who can deny being impressed with such tremendous plants as the posts of Fort Benning, Fort Sill, Fort Bragg, and Fort Knox that were built within the span of a single generation?[60]

The list of accomplishments was long. But whether the Construction Division would be equal to a major emergency was open to question.

### *Preparedness and Public Works*

A construction force capable of meeting almost any emergency existed in the civil works organization of the Corps of Engineers. A nationwide network of field offices, a host of professional civilian employees, and a select group of officers imparted strength to the Engineer Department. A $2.5-billion program of navigation, flood control, and fortifications projects, undertaken in the years of peace, contributed to the department's stability.[61] Vast engineering enterprises tested its capacity to perform ex-

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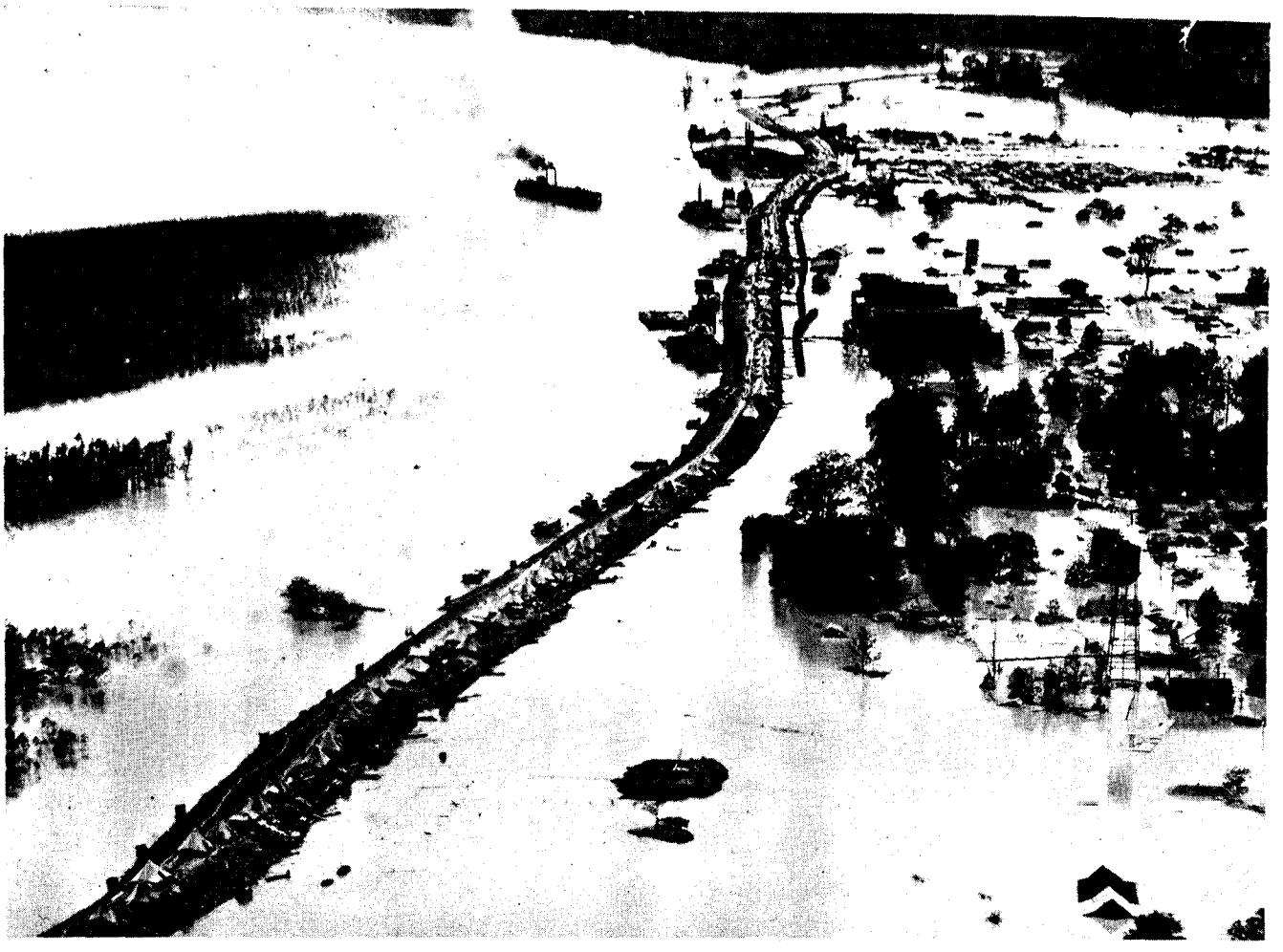
[57] (1) Statement of Gen Hartman (prepared in response to questionnaire from the authors), 5 Jul 55, pp. 3–4. (2) Danielson Comments, pp. 18–19. (3) Memo, M. H. McIntyre for the President, 19 Dec 36. (4) Ltr, Dickson to McIntyre, 20 Dec 36. Last two in Roosevelt Papers, OF25–X, WD QMC, 1933–34. (5) Intervs with Mr. Dickson, 10 Jul 61; Brig Gen George P. Tyner, 28 Sep 55; Maj Gen James H. Burns, 24 May 56. (6) Memo, Gibbins for Rcd, 21 Jun 38. QM 625 1935–41. (7) Memo, G–4 for SGS, 23 Jun 38. G–4/22853–27.

[58] Statement of Gen Hartman, 5 Jul 55, p. 4.

[59] Ltr, Craig to Ickes, 15 Aug 38. G–4/29778.

[60] Answers to Questionnaire, Violante to authors, 25 Sep 57.

[61] Table, prepared by OUSW, Sep 41, title: Constr Opns, FY's 1920–39. USW Files, Misc and Sub—Constr Transfer, QM–CE.



CAMP ON LEVEE, ARKANSAS CITY, ARKANSAS, DURING 1927 FLOOD

tensive construction in time of war or in preparation for war. Depicting operations at the $86-million Fort Peck Dam, one officer declared: "This is not theoretical training and experience; it is the real thing!"[62] Battling floods could be likened to hard-fought military battles. "In physical and mental strain," wrote one veteran of the 1927 Mississippi River disaster, "a prolonged high-water fight on threatened levees can only be compared with real war."[63] Experience gained in civil works could pay huge dividends in a defense emergency. But throughout the twenties and thirties, the system which produced this experience was in danger of being scrapped.

Resuming their campaign against the Engineers in the fall of 1920, proponents of a public works department tried a fresh approach. Admittedly, the tussle over military construction had been a mistake. "My idea," chief tactician Leighton afterward confessed. "I wish I hadn't thought of it."[64] The new line was to leave the function in the War Department, at least temporarily. Criticism of the En-

[62] Capt. C. H. Chorpening, "Experience for War," *The Military Engineer*, XXIX, no. 166 (July–August 1937), p. 250.

[63] Maj. John C. H. Lee, "A Flood Year on the Mid-Mississippi," *The Military Engineer*, XX, no. 112 (July–August 1928), p. 307.

[64] Leighton Interv, 2 Apr 57.

gineers was to be more temperate. Flanking movements would replace frontal assaults. A prospectus of the public works department contained this commendation of the Corps:

> While the work of the Army engineers has been open to many objections and has often been accompanied by delays and wastefulness, it has been conducted with the minimum of graft and the minimum of petty political partisanship. And this has been not so much because of the men themselves, but because they were given a high standing, were suitably protected in their positions, and could not be peremptorily discharged without real cause. It is the principle involved in this matter which should be preserved. . . . To apply this principle to the permanent technical force of a Department of Public Works, it will be necessary that the members of this force should be given as secure a tenure of office as is given to officers of the Army and Navy.

The Engineers' contention that public works experience was essential to preparedness received this endorsement:

> It is realized [the prospectus stated] that modern war demands the services of nearly the entire engineering profession, and provision should therefore be made for the fullest use desired by the Army of the officers of this new department. They should be and can be as eligible for immediate detail with the Army in time of war or other emergency as are the present officers of Army engineers who are engaged on civil work.

How the plan would work was hazy.[65]

A determined offensive soon got rolling. The Federated American Engineering Societies, led by Herbert Hoover, spearheaded the drive for legislative action. The Associated General Contractors assumed a major role in the struggle, and its aggressive managing director, General Marshall, became the firebrand of the movement. During the fall of 1920 efforts focused on reviving the Jones-Reavis proposal for a department of public works. Then, at the lame duck session of the 66th Congress convened in December of that year, a joint resolution established a committee of the House and Senate to study the executive branch of the government with a view to reorganization. In May 1921 the President appointed a representative to work with the committee. Privately, Harding told industry leaders that his administration would press for a public works department.[66]

The Engineer posture was defensive; the attitude was one of watchful waiting. To combat the charge "neither engineers nor soldiers," the Corps adopted a career development program designed to give every young officer a degree from a civilian engineering college in addition to experience with troops and civil works. The latter day Army Engineer was likely to be an alumnus of Cornell, California, or MIT, as well as a top graduate of West Point. Master's degrees were plentiful, and here and there was a Ph.D.[67] To build support within the Army, the Engineers engaged in missionary work. A lecture by General Patrick at the General Staff College embodied their message. Emphasizing the "vital importance" of civil works in developing Engineer officers, Patrick stated:

> This is a matter which is not thoroughly understood by the army at large, . . . and it is known that in many quarters there

[65] *The Constructor*, January 1922, pp. 65, 86.

[66] (1) *The Bulletin of the AGC*, January 1921, p. 33. (2) 41 *Stat.* 1083. (3) 42 *Stat.* 3. (4) A. C. Oliphant, "The Need for a Bureau of Public Works," *The Constructor*, November 1925, p. 23.

[67] (1) 025 Part 2. (2) Incl with OCE Memo, 13 Jun 28. 316 (Office Methods and Opns). (3) Data prepared in EHD, Education of CE Officers, 1920–39.

is a decided prejudice against the Corps of Engineers being charged with the conduct of such civil works. To us it seems clearly evident that this is due to a misunderstanding and misconception of the relation which this duty bears to the work of the Corps of Engineers in war. . . . We must have in the permanent Army a sufficient number of trained military engineers to guide and direct our reserve officers until such time as they shall have become thoroughly conversant with military conditions. . . . We know of no other way in which this training can be secured except by the employment of engineer officers on public works.[68]

While attempting to shore up their position, the Engineers tried to steer clear of controversy. Much as they wanted the military construction function, they were content to bide their time.[69] If, as the saying went, the first step in any war was to reorganize the Quartermaster Corps, their opportunity would come.

Aiding the cause of the Engineers were proceedings instituted by the Justice Department late in 1922. Around Thanksgiving Day, Attorney General Harry M. Daugherty filed lawsuits totaling $55 million against eleven of the sixteen World War cantonment contractors. A month later, after examining the evidence of the Graham committee and hearing a number of witnesses, among them, reportedly, the wartime Chief of Engineers, a special grand jury indicted former Assistant Secretary of War Benedict Crowell for conspiracy to defraud the government. Charged as co-conspirators were Starrett, Lundoff, Tuttle, and three other members of the Committee on Emergency Construction.[70] Reaction to these developments was mixed. "A monstrous wrong," said President Arthur S. Bent of the AGC. "To indict a great industry, to accuse its outstanding leaders of treason to this Government of the most despicable character, is to attack the morale of the entire country and feed the dangerous fires of distrust and lawlessness."[71] By contrast, Col. Clarence O. Sherrill, the Engineer officer who served as principal military aide to Presidents Harding and Coolidge, expressed the view: "Take the graft and absolute loss of funds through graft to the Government . . . . I feel no hesitation in saying that if that work had been under the Corps of Engineers . . . that would never have happened."[72]

The government lost every case. Imputing political motives to the Republican administration, Crowell and his fellow defendants retained as counsel Henry L. Stimson, Secretary of War in the Taft administration, and Frank J. Hogan, a prominent Washington lawyer. The defense attorneys promptly filed demurrers. Appearing before the Supreme Court of the District of Columbia in the fall of 1923, they assailed the indictment as "an attempt to turn a difference of political opinion into a charge of crime."[73] On 30 January 1924 Judge Adolph A. Hoehling sustained the de-

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[68] Lecture by Gen Patrick, 10 Feb 20. 025 Part 2.

[69] (1) Ltr, CofEngrs to Col S. M. Felton, 24 May 26. 400.12 Part 33. (2) Memo, CofEngrs for Rcd, 13 Jun 28. 020 (Engrs, Office, Chief of) Jan 21–Sep 40.

[70] New York *Times*, November 25, 1922, p. 15; December 5, 1922, p. 10; December 31, 1922, p. 1.

[71] Address before Annual Mtg of AGC at Los Angeles, 30 Jan 23. Reprinted in *The Constructor*, February 1923, p. 22.

[72] H and S Joint Comm on Reorgn of the Admin Br of the Govt, 68th Cong, 1st sess, *Hearings* on S Jt Res 282, p. 744.

[73] *The Constructor*, November 1923, p. 27. See also New York *Times*, October 4, 1923, p. 25; October 5, 1923, p. 21.

murrers, thus dismissing the indictments. The civil actions also failed. One by one, suits against the contractors were thrown out of court. In the only case which went to trial, the jury took just three minutes to bring in a verdict for the defendants. As General Marshall put it, the prosecutions "begun with a shout" had "ended with a whisper."[74] Nevertheless, suspicion of wrongdoing lingered in the public mind. The "colossal cantonment steals" of World War I—the phrase is H. L. Mencken's—became an American myth, and echoes of scandal reverberated down through the years.

Early in 1924, while the construction world awaited Judge Hoehling's decision, a joint committee of Congress began hearings on proposals to reorganize the government. An imposing array of witnesses appeared in support of a public works department—officials, professors, and industry spokesmen. Propounding the classic argument for consolidation, Secretary of Commerce Hoover testified: "At the present moment we have a great many departments doing construction work. Congress today has no knowledge of the totals of our construction activities."[75] Speaking for the American Society of Civil Engineers, Leonard Metcalf elaborated on this theme:

> The Engineer Corps stands rather as an executor of works than as a planner . . . . The question of a desirable project is, of course, a relative question. There are thousands of projects which are perfectly feasible. The relative economic desirability may be different, however. And my point was that . . . it was not the function of the Engineer Corps, nor was it so regarded, I take it, by the Corps itself, to point out to Congress or to the Senator who might have been responsible for this measure that it was less desirable economically than a number of other projects which were before them.[76]

Other witnesses contended that the new department would strengthen national defense. Looking at the matter from the standpoint of preparedness, Professor William F. Willoughby of the Institute for Government Research averred: "Should war break out, the Government would have its engineering ability practically mobilized in one department, available for use . . . . Of course," he added, "it would then work under military direction."[77] A plan emerged for detailing Engineer officers to the public works department. Extolling the advantages of this plan to the Engineers, General Marshall stated: "I think it would be a distinct addition to their training . . . they would go back to the service and to the Army with a better development and a greater asset than can now be had . . . where their line of construction is limited."[78]

Opposition came from expected quarters, the Secretary of War and the Corps of Engineers. Called before the joint committee, Secretary Weeks presented a judicious argument for keeping things as they were. After weighing the pros and cons of transferring rivers and harbors work from the War Department, he concluded:

> It is apparent that the principal points upon which decision might rest are in dis-

[74] General R. C. Marshall, Jr., "Cantonment Suits Now in Discard," *The Constructor*, November 1927, p. 19.

[75] H and S Joint Comm on Reorgn of the Admin Br of the Govt, 68th Cong, 1st sess, *Hearings* on S Jt Res 282, p. 344

[76] *Ibid.*, pp. 253–55.

[77] *Ibid.*, p. 72.

[78] *Ibid.*, p. 583.

pute; moreover, that they are not of a character to admit of practical proof one way or the other. . . . In this connection, it should be remembered that the present arrangement has a record of many years of successful operation to its credit, whereas the proposed arrangement has little more than a theory with which to support its claim.

I want to say at this point, Mr. Chairman, that I think one of the finest exhibitions in our Government has been the conduct of the rivers and harbors improvements under the Engineer Corps of the Army. . . . That the work could have been more economically done under civilian administration, I do not believe.[79]

Last minute witnesses, appearing at their own request, were General Beach and Colonel Sherrill. Disposing of insinuations about "little creeks and streams" (the Board of Engineers for Rivers and Harbors, created in 1902, was an effective safeguard against pork-barrel projects), Beach warned the committee against flying to ills they knew not of. Civilians, he emphasized, would be far more responsive to political pressure than military men. Questioned about the wisdom of detailing Engineers to the proposed department, he ridiculed the idea that officers could be effectively trained outside the Army. Taking a bolder line than the Chief, Colonel Sherrill made a strong bid for more construction functions. High on his list was the work of the Constructing Quartermaster General. Both Beach and Sherrill identified proponents of a public works department with the "vicious" cost-plus system. In fact, they suggested, the real purpose of these men was to fasten that system on the government. Alluding to cost-plus profiteering in the recent war, General Beach observed: "It was a good deal like the traditional tiger getting his taste of human blood."[80]

The testimony of Beach and Sherrill produced a sharp reaction within construction circles. In a resolution of censure, the executive board of the American Society of Civil Engineers branded the statements of these officers as "manifestly unfair and grossly inaccurate" and deplored their "wholesale charges of graft and incompetency." The resolution went on to urge that, "in the best interest of the people of the United States," all river and harbor work be placed "under civilian and not under military engineering direction."[81] A press release issued by the society raised the following questions: did the Corps of Engineers honestly believe that members of the profession outside its own ranks were untrustworthy; did the Engineers deny that the building of the wartime cantonments was a creditable achievement; did the Chief of Engineers endorse charges which no court had upheld?[82] Joining in the condemnation of Beach and Sherrill, Frederick L. Cranford, president of the AGC, labeled their attacks on brother engineers as "despicable and damnable." He contended that the Corps had "fixed upon a policy of destroying the established method of conducting construction work in this country" and would use any means to accomplish its purpose. Unless the Engineers were stopped, virtually all federal construction would sooner or later come under their control. Only by the creation of a public

[79] *Ibid.*, pp. 116–17.

[80] *Ibid.*, pp. 695–715, 743–746.

[81] Resolution, ASCE, Board of Direction, Apr 8, 1924. Reprinted in *The Constructor*, May 1924, p. 34.

[82] Rpt, ASCE Comm on Public Relations. Reprinted in *The Constructor*, May 1924, pp. 34, 51–52.

works department could this blow be averted.[83]

If civil engineers and general contractors believed a change was necessary, the joint committee of Congress did not. In its report, released in June 1924, the committee rejected the idea of a public works department. On the subject of the Engineers' civil responsibilities, its findings were as follows: "The assignment of Army Engineers to river and harbor work is at the present time the principal means whereby these officers can acquire the engineering experience necessary to fit them to meet the demands put upon them in time of war; and, on the other hand, there is a measure of economy in using personnel of the Corps of Engineers on necessary public works of a nonmilitary character." The committee recommended against a transfer of functions from the Corps.[84] Terming this verdict "illogical" and complaining of "political pressure strongly brought to bear in this way and that," General Marshall sounded the call for a new offensive. Leaving the campaign for legislative action largely to the Federated Engineering Societies, he launched attacks along another front.[85]

In speeches and articles, in testimony before Congressional committees, in every forum open to him, Marshall denounced the Engineers as socialistic. Increasingly, river and harbor improvements were being accomplished under the system known as day labor or purchase and hire. The building of the Panama Canal had furnished a striking demonstration of the system's effectiveness; and an Act of July 27, 1916, provided that no navigation or flood control project would be done by contract if bids exceeded by 25 percent the estimated cost of the job.[86] By 1924 the Engineers were doing 75 percent of their work by day labor as against 12 percent in 1900; and capital investment in government-owned equipment was about $50 million as compared with $2.5 million a quarter of a century earlier.[87] Condemning the Corps' use of day labor, Marshall told a House committee:

> The Bolshevistic regime of Russia favors the taking of industry by the Government, the nationalization of industry, and its operation by individuals on the Government payroll. The Corps of Engineers of the Army favors the application of the same principle to the Government work which falls under its control. . . . It actually operates whatever industry it controls as the soviet Government in Russia would operate it.

He went on to argue, in this case justly, that Engineer estimates were too low, since they made no allowance for hidden costs, such as interest and insurance. Extending over four years, Marshall's crusade failed.[88] Regularly, bills were introduced to compel the Corps to do more work by contract; with equal regularity, Congress declined to enact such legislation.

One of several proposals for a public works department discarded by Congress during the Coolidge administration, the Wyant bill of 1927 called forth a thoughtful statement by Secretary of War Davis. Taking up the "specious arguments, speculations, and postulates" advanced by the opposition, he disposed of them,

[83] *The Constructor*, November 1924, p. 38.
[84] H Doc 356, 68th Cong, 1st sess, 3 Jun 24, p. 21.
[85] *The Constructor*, June 1924, pp. 28, 50.
[86] 39 *Stat.* 411.
[87] H Subcomm of the Comm on the Judiciary, 69th Cong, 1st sess, *Hearings* on H R 8902, pp. 1–12.
[88] (1) *Ibid.*, p. 34. (2) The campaign can be followed in the pages of *The Constructor*, 1924–28.

one by one. To consolidate all engineering in one department would be as senseless as to consolidate all chemistry. Engineering was a means to an end, not an end in itself. Each operating unit ought to have its own technical force. There was no advantage in bigness as such; quite the contrary. Competition made for efficiency. Turning to questions of the Engineers' competence, the Secretary pointed out that there were no complaints from users of the waterways and people of the river valleys. The service of the Corps had been exceptional. After mentioning the Panama Canal, the work on the Mississippi, the deepening of the Great Lakes harbors and channels, and the improvements along the coasts, Davis went on to state: "The Corps of Engineers of the Army has built up a degree of respect and a capacity for teamwork which I do not believe are equaled, and certainly not surpassed in either private or Government organizations. . . . No other bureau can hope to achieve this coherence without the fraternal background of war sacrifice which is its inspiration." Predicting that in future wars engineering would be "even more important and far more complicated" than in the past, Davis held that "a competent and versatile" Corps of Engineers was essential for adequate defense. The civil works responsibility was a guarantee that such a corps would be available.[89]

As the turbulent twenties drew to a close, the Engineers moved to heal the breach with industry. A younger generation of officers moved into key positions in the Corps. Old policies gave way to new, and moderate views prevailed. A cost accounting system, the first in the federal government, produced more accurate estimates and enabled contractors to bid successfully for river and harbor jobs. A 300-million-dollar program of flood control, adopted in the wake of the 1927 disaster, was designed to make maximum use of contracting firms. Work was "packaged" in such a way that small concerns could bid as well as large; specifications were revised to throw less risk on contractors; and the Corps' cost and experience records were opened to prospective bidders. In a message to the AGC convention at Chicago in February 1929, Brig. Gen. Thomas H. Jackson of the Mississippi River Commission explained that a certain amount of day labor was "vital" to the Corps' existence, but, he said: "We want this; we want no more."[90] On becoming Chief of Engineers in the fall of 1929, Maj. Gen. Lytle Brown announced that all river and harbor work would be done by contract except where it was "manifestly impracticable or a waste of government funds."[91] Industry spokesmen applauded the "new spirit of sincerity and cooperation."[92] Unquestionably, a change in the management of the AGC did much to promote this spirit. General Marshall's resignation in May 1928 helped usher in an era of good feeling between contractors and the Corps of Engineers.

Hoover's elevation to the Presidency gave fresh impetus to the movement

[89] Ltr, Davis to Rep William Williamson, 25 Jan 28. In H Comm on Expenditures in the Executive Depts, 70th Cong, 1st sess, *Hearings* on H R 8127, pp. 3–6.

[90] Brig. Gen. Thomas H. Jackson, "A New Policy on Flood Control Work," *The Constructor*, April 1929, pp. 26–29.

[91] Ltr, Brown to Editor. In *The Constructor*, November 1929, p. 51.

[92] *Ibid.*, October 1930, p. 24.

for a department of public works. During his term as Chief Executive, at least a dozen messages went from the White House to Capitol Hill requesting authority to reorganize the government, and several bills to create a works agency received the Presidential blessing. Hearings on these bills took a curious turn as witness after witness was called upon to explain why all federal construction should not come under the Army Engineers. Hoover's endeavor reached its high point in June 1932, with the enactment of legislation empowering him to make governmental reorganizations, subject to Congressional approval. Hoover could come no closer to his goal. In January 1933 Congress disapproved an executive order, transferring the civil functions of the Corps of Engineers to the Interior Department. The next move would be up to the incoming administration.[93]

During the early years of the New Deal, the proposal for a works department was revived. Secretary of the Interior Ickes, a proponent of the plan, waged a campaign against the Engineers which was no less determined than the one General Marshall had conducted in the twenties. But despite Ickes' almost fanatical zeal, the effort failed. Years of study by Executive commissions and prolonged debate in Congress culminated in the Reorganization Act of 1939, which granted the President extraordinary powers but specifically exempted the Corps of Engineers.[94] When questioned about the "conflict" between the Engineers and the Interior Department's Bureau of Reclamation, Roosevelt expressed the feeling that "these two construction agencies ought to be maintained . . . in such a way that neither one of them would overwhelm the other." Emphasizing that "both are extremely good," he continued:

> In case of war the Army Engineers are intended, the great bulk of them, for service at the front with the Army and, therefore, we felt it would be a mistake to make them so big that they would do all the construction work.
>
> So we laid down what might be called a rule of thumb; and that was that they would continue to do all the harbor work, all the Mississippi work and all the river work where flood control was the primary function—flood control and navigation, the two being tied together; and to allocate the rest of the work . . . in such a way that the Bureau of Reclamation would be kept going with equal importance to the Army Engineers—to keep both organizations functioning. Each one would be merely a check on the other. The result is that we have now a very excellent system . . . .[95]

At session after session, for nearly two decades, Congress considered arguments for and against a transfer of river and harbor construction from the Corps of Engineers. The question was examined from every angle—efficiency, economy, and national defense. Proposals for a

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[93] (1) H Comm on Expenditures in the Executive Depts, 72d Cong, 1st sess, *Hearings* on H R 6665 and H R 6670, pp. 40–41, 65, 93–94, 111, 159, 179. (2) 47 *Stat.* 413. (3) H Doc 493, 72d Cong, 2d sess, 9 Dec 32. (4) 76 *Cong. Rec.* 2109.

[94] (1) *The Secret Diary of Harold L. Ickes*, II, *The Inside Struggle, 1936–1939* (New York: Simon and Schuster, 1954), 151–152, 318, 337–338. (2) *The Public Papers and Addresses of Franklin D. Roosevelt, 1938*, compiled by Samuel I. Rosenman (New York: The Macmillan Company, 1941), pp. 183–192. (3) 53 *Stat.* 561.

[95] *Public Papers and Addresses of Franklin D. Roosevelt, 1939* (New York: The Macmillan Company, 1941), p. 419.

change were invariably rejected. Weighing heavily in the decisions of Congress was the conviction that the Corps' civil functions were essential to preparedness.

### *Mobilization Plans*

With events of 1917 fresh in mind, Congress had adopted safeguards against future unpreparedness. Aimed at preventing a repetition of the near chaos that reigned in the early months of the war were provisions of the 1920 Defense Act which defined responsibility for emergency planning. Under this law, the Assistant Secretary, as business head of the War Department, would develop plans for industrial mobilization and would oversee procurement; the Chief of Staff, as military head, would prepare plans for national defense and for mobilizing the nation's manhood. Hailing the act as "the beginning of a new era in the service of this department to the country," Secretary Weeks said in 1921: "It provides for an effective development of our strength in the protection of our ideals. The American people can now, in time of need, be guided in their mobilization through a system prepared . . . in accordance with the best of military doctrines."[96] Unhappily, results fell short of expectations. The climate of American opinion during the peace decades was inhospitable to realistic planning for war.

Machinery to implement the act went into operation in the early 1920's. Secretary Davis took a first step toward industrial preparedness in 1921, when he created the Planning Branch, Office of the Assistant Secretary of War (OASW), and assigned to it these duties: determine the productive capacity of American industry, allocate facilities, and assure the supply of critical and strategic material. Secretary of War Weeks and Secretary of the Navy Edwin Denby took a second step in 1922, when they established the Joint Army and Navy Munitions Board (ANMB). An outgrowth of competition between the two services during the war, ANMB was to co-ordinate procurement of munitions and supplies required by the Army and Navy for war purposes. Finally, through the efforts of a few farsighted officers, the Army Industrial College was founded in 1924 to promote the science of industrial preparedness. From this institution and its leading spirits—among them Majors James H. Burns and Charles T. Harris, Jr., of Ordnance and Col. Harley B. Ferguson of the Engineers—flowed much of the zeal that attended industrial planning. On the other side of the house, in the War Department General Staff, logistical considerations received far less weight. Drawn largely from the line of the Army, the officers of the General Staff were, on the whole, better equipped to cope with problems of strategy and organization than with problems of shelter and supply.

Soon after its establishment, the Planning Branch, OASW, began to study the nation's industry against the background of past mistakes and prospective needs. In 1917 there had been no industrial inventory to guide procurement officials, and, as a result, unnecessary plants were built. Some factories were swamped with orders, while others operated far below

[96] *Report of the Secretary of War, 1921* (Washington, 1921), p. 8.

capacity. Lack of information as to sources of power and raw materials, availability of labor, means of transportation, and the like, led to confusion, delay, and needless expense. By June 1923 plant surveys were well under way. Year after year Army representatives made the rounds, collecting production data and studying problems of conversion or expansion. Although the planners recognized that many plants would have to be enlarged and some new ones built, they looked to industry to do the job.[97] The planners respected what one of them termed "perhaps our greatest weapon . . . the potential capacity of American industries to produce munitions."[98]

That a war construction program would be necessary was generally assumed by experts in logistics, but plans for such a program were a long time maturing. Not until 1929, when Assistant Secretary Patrick J. Hurley asserted his authority over military construction, was there a policy covering this phase of mobilization: OASW would authorize projects and review plans; The Quartermaster General would supervise the work. So great was the magnitude of the Assistant Secretary's mobilization task—marshaling the entire economic resources of the country—that a comprehensive blueprint was long delayed. Admittedly tentative and fragmentary, the first Industrial Mobilization Plan (IMP), completed in 1930, dealt with broader issues than construction.[99] Early in 1932, the head of the Planning Branch, OASW, averred:

> Of all the phases of industrial mobilization, it may be admitted that the problem of construction of new facilities and conversion and expansion of existing ones has lagged perhaps more than any other feature in reaching a solution. No definite directive has ever been furnished the supply arms and services on this subject and no clear cut methods of attacking the problem have ever been developed.[100]

The Planning Branch was not alone in neglecting this important aspect of preparedness. Rejecting lessons of the recent conflict, the General Staff evolved a scheme reminiscent of the war with Spain. The Mobilization Plan of 1924, prepared while General Pershing was Chief of Staff, incorporated the old principle of local mobilization. An army of 4 million men would be mustered in company, battalion, and regimental units, and, after a brief period of training, shipped overseas. Little, if any, new construction would be necessary. Although the 1924 plan mentioned The Quartermaster General as the Army's construction agent, the 1928 plan was more consistent. Under this second plan, developed during the term of General Charles P. Summerall as Chief of Staff, decentralization was virtually complete. In matters of supply, the corps area commanders were practically supreme.

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[97] (1) WD Bull 14, 17 Aug 23, sub: Industrial Mobilization, p. 4. (2) Constance M. Green, Harry C. Thomson, and Peter C. Roots, *The Ordnance Department: Planning Munitions for War*, UNITED STATES ARMY IN WORLD WAR II (Washington, 1955), pp. 54–55.

[98] Testimony of Col Harry K. Rutherford, 6 May 40. In S Subcomm of the Comm on Appns, 76th Cong, 3d sess, *Hearings* on H R 9209, p. 137.

[99] (1) WD Ltr AG 381 (4–20–29) (Misc) C, 13 May 29. (2) Notes of Conf in OASW, by Capt W. R. White, OQMG, 30 Jul 29. Opns Br Files, Mobl Plng. (3) For a discussion of the IMP, 1930, see Harold W. Thatcher, Planning for Industrial Mobilization, 1920–1940, QM Historical Study 4, 1943, pp. 84–96.

[100] Memo, Dir Plng Br OASW for Dir AIC, 8 Jan 32. ASW Plng Br Files, Constr 337.

The commanders, not The Quartermaster General, would be responsible for shelter.[101] Discussing the philosophy behind this plan, a history of mobilization stated: "As the memory of World War I began to fade, the importance of supply began to fade also. . . . The planners . . . became obsessed with the preeminent importance of manpower, and, as the obsession grew, the other factors of mobilization ebbed in importance."[102]

Lecturing at the Army War College in 1928, Col. James K. Parsons, chief of the Mobilization Branch, G–3, explained the staff's thinking on emergency construction. Recognizing that "an enormous amount" of shelter would be needed for mobilization, planners had given a great deal of thought to ways and means of providing it. Billeting had seemed the easiest solution, but because Congress probably would be unwilling to go along, no provision was made for quartering troops in private homes. Divisional camps and cantonments had also been ruled out. Construction would consume too much time and effort and place too great a burden on transportation systems. And, besides, where were the great cantonments of World War I? Most of them were gone. In another emergency, the Army would follow a different course:

> In lieu of camps and cantonments [Parsons related] the policy is to charge each corps area commander with the responsibility of procuring shelter for the troops mobilized by him. It is understood that he will undertake no construction unless he finds that after full use is made of available public buildings, supplemented by available tentage and suitable privately-owned buildings, additional shelter is still required.[103]

Again, as in the Spanish-American War, troops would occupy fairgrounds, race tracks, and the like. In 1898 the Maryland National Guard had gone to Pimlico. Parsons suggested that the 29th Division be quartered in Baltimore's huge Montgomery Ward building and drilled in nearby Carroll Park.[104] Asked later what he thought of this idea, the 29th's commander shook his head and said: "Preposterous."[105]

The philosophy of the General Staff was slow to change. The phrase "minimum construction" ran like a thread through all its plans. General MacArthur, who succeeded Summerall as Chief of Staff in 1930, continued to support the no-cantonment thesis. Testifying before the War Policies Commission in May 1931, MacArthur stated: "A mobilization plan must depend on certain basic assumptions of fact. Upon the correctness of these assumptions depends the successful application of the plan." Plans formulated during his regime were based on three assumptions; and one was:

> That great cantonments, such as we had in the World War, will not be constructed. Full utilization of Federal, State, county, and municipal buildings will be made as troop shelter. Where necessary, arrangements will be made to use privately owned buildings.[106]

That MacArthur, an Engineer and one of the most brilliant soldiers of his time,

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[101] (1) WD Gen Mobilization Plan, 1924. AG 381 (5–1–24) (Misc C). (2) WD Gen Mobilization Plan, 1928. AG 381 (8–1–28) (Misc C).

[102] Kreidberg and Henry, *History of Military Mobilization*, p. 415.

[103] Lecture by Col Parsons, 13 Sep 28. AG 381 (GMP 28).

[104] Truman Comm *Hearings*, Part 2, p. 478.

[105] Interv with Maj Gen Milton A. Reckord, 25 Nov 58.

[106] H Doc 163, 72d Cong, 1st sess, pp. 357–58.

could make this assumption indicated the extent to which pacifism and penury had undermined military judgment.

As these plans of the General Staff took shape, the M-day capability of the Construction Service declined. In the early 1920's the Service was blessed with a wealth of war experience and a strong Reserve. On file in the central office were structural drawings, organizational blueprints, layouts, specifications, and a history of the wartime division—all turned over by General Marshall. Many members of his "construction crew" were Quartermaster Reservists, and a Construction Division Association formed an active link between past and present. A Planning Branch in the Washington headquarters was the guiding force. Heading it were able and experienced officers—Captain Hobson, Capt. Edward M. George, and Col. Milosh R. Hilgard. Their principal civilian aide, William F. Kinney—"our wheelhorse," they called him—was a dedicated man. In each of the nine corps areas, a construction district, manned by Reservists, made plans for construction. During 1925 almost 500 Reserve officers participated in this planning. With the publication of the 1928 Mobilization Plan, virtually all activity ceased. The construction Reserve now came under the corps area commanders, the districts disappeared, and the Planning Branch merged with the War Planning and Training Branch, OQMG. Interest in the Construction Division Association waned. Wartime records went into storage. The loss was nearly total.[107]

In the eyes of the General Staff, the Constructing Quartermaster General had but one M-day duty—to provide structural plans for such additional shelter as might be necessary. The type of structure to be used was a debated question. In 1923, on General Pershing's orders, the Construction Service prepared tracings for prefabricated wooden structures. To be manufactured in sections at the mills, these small one-story portables were designed for quick and easy erection by troops or unskilled workmen.[108] Asked for an opinion as to the military potential of prefabs, William A. Starrett wrote: "As a practical matter the thing would be a disappointment, if not a disaster." He pointed out that prefabs would necessitate longer roads and utility lines than the larger two-story cantonment types. Productive capacity was small, and a prefab order for 50,000 troops would "swamp the mills of the country." Furthermore, Starrett warned, transporting the bulky sections would be no easy matter.[109] From the construction standpoint, these arguments were valid. But five years were to pass before permission to update the World War cantonment drawings came through. By early 1929, a few rough sketches—the first in the new 700 series—were ready for inspection. Although G–4 approved these plans, the General Staff continued to have a predilection for prefabs.[110]

As the illusion of permanent world peace began to dissolve in the mid-1930's, a small but vocal group of men raised

[107] Jesse A. Remington, Planning for Mobilization (MS), 1963, pp. 5, 13–16, 23.

[108] QM 634 (1922–34).

[109] Ltr, Starrett to ExecO Constr Serv, 22 May 23. QM 634 (1922–34).

[110] (1) Memo, Cheatham for Horton, 2 Jul 28. (2) Ltr, Cheatham to TAG, 30 Jan 29. Both in Opns Br Files, Mobl Plng. (3) Memo, G–4 for TAG, 15 Feb 29. G–4/20052–19.

the cry for realistic planning. Chief among them were Col. Charles T. Harris, director of the Planning Branch, OASW, and Lt. Col. James L. Frink, who headed The Quartermaster General's planning organization. Also prominent in this movement were Maj. Douglas C. Cordiner, the Quartermaster officer who was Harris' adviser on construction; Maj. Theodore P. Heap, Frink's deputy; and the hard-working Kinney. Expressing the attitude of this small band was Colonel Harris' homily:

> Even though we all deprecate war and feel that it is an unhappy undertaking, it must be remembered that every generation in the United States born prior to 1918 has seen a war. Until human nature can be changed it is only logical to expect that the future will bring more wars. If wars are bound to come, it is our duty so to plan as to minimize the harmful effects of war and to insure that this nation be victorious.[111]

In the spring of 1934, Harris and his colleagues were joined by Colonel Hartman, or, as he came to be known, "Mr. Construction himself."

Returning to Washington in 1934 after an 8-year absence, Hartman checked on the status of plans for emergency construction. The facts were chilling. The Planning Branch of the Construction Division, recently revived by General Bash, was starved for funds and woefully undermanned. The only known requirements were for remount depots, distribution centers for horses and mules; and the only detailed layouts were for these Quartermaster facilities. The 700 series drawings were in a sad state: a few tracings for barracks, mess halls,

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storehouses, and sheds—that was all. Many details were missing; there were numerous structural flaws; and the lumber sizes called for were no longer produced commercially. Equally distressing, not a single copy of General Marshall's history was around. Hartman did his best to repair the damage. He threw himself into the struggle for realistic M-day plans and called for a thoroughgoing revision of the 700 series.[112] No such effort could succeed completely. "We had no money," Hartman explained. Planning was "a side line rather than a fixed job."[113]

Research undertaken by the Army Industrial College disclosed an enormous gap between accomplishments and needs in the field of construction planning.

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[111] Col. C. T. Harris, Jr., "Industry and National Defense," *Army Ordnance*, vol. XVI, no. 96 (May–June 1936), p. 331.

[112] (1) Statement of Gen Hartman, 5 Jul 55, pp. 1–2. (2) Memo, Kinney for Frink, 7 Feb 34. Opns Br Files, Mobl Plng.

[113] Testimony of Gen Hartman, 12 Aug 41. In Truman Comm *Hearings*, Part 7, p. 2040.

After reviewing the wartime experience and evaluating current plans in the light of this experience, a committee headed by Maj. Raymond G. Moses of the Corps of Engineers submitted a 96-page study of the problem. Gravely critical of existing plans, the committee urged prompt corrective action. The fact had to be faced: mobilization would require a major construction effort. Plans had to be made accordingly. The committee underscored the need for firm construction requirements, for a survey of the building industry, for uniform types of emergency contracts, for standard plans and specifications, and for a strong organization in the field. Most important, Moses and his colleagues held: "There should be centralized control of all construction activities in the Army."[114] Armed with the findings of the Moses group, Colonel Harris called together representatives of G–4 and the Arms and Services in September 1934. After describing the "mammoth size" of the emergency construction task and receiving a lukewarm response, Harris told the others bluntly:

> It is absolutely necessary to get this construction control actively oriented and begin to get some plans for its accomplishment. It will be the first load placed on industrial America when war is declared. We must get requirements from the Corps Area Commanders for their needs. We must get requirements for industrial needs . . . . We have got to analyze the priorities and get that coordinated. If the Corps Area Commander should not be charged with construction, we must get it changed . . . . The thing we have to plan is what we are going to do and how.[115]

Failing to rally much support, Harris tried to start the ball rolling with the help of Frink and Hartman.

Battling the high tide of pacifism and isolationism, the planners made uncertain progress. Reflecting the mood of the American people were the Nye committee investigation of the international arms traffic and the branding of munitions manufacturers as "merchants of death"; the passage of neutrality acts in 1935 and 1937; and the embargo on exports of war materials to belligerents in the Spanish Civil War. As late as October 1937 the President's appeal for a quarantine against aggressors evoked no popular response. So pervasive was this mood that it infected even top levels of the War Department. In this situation, planning funds were hard to come by, and planning continuity was difficult to maintain. Much that needed doing remained undone. Nevertheless, the planners scored some gains.

Assistant Secretary Harry H. Woodring scored one gain on 14 June 1935, when he approved drafts of two emergency construction contracts. Developed in co-operation with the AGC, these forms would supersede the controversial agreement used in World War I. The first, designed "for relatively small projects where the scope of the work is known, and there is small probability of material changes and where time will permit competitive bidding," was a fixed-price contract with an "escalator" clause. This clause provided for increases in the contract price when wages or prices rose. The second form was a negotiated "evaluated fee" contract. Based on the cost-plus-a-percentage principle, this agreement introduced a novel method of computing fees. In 1917–18 contractors had received a percentage of the

[114] AIC Rpt on Problem 17, Conversion and Construction of Facilities, 21 Feb 34. QM 020 (Constr) 1921–39.

[115] Min of Mtg in Plng Br OASW, 11 Sep 34. G–4/20052–55.

cost of the work regardless of the quality of their performance or the efficiency of their operations. The new form provided a bonus for good work and a penalty for bad. Although it perpetuated the basic defect of all percentage contracts by using actual costs to measure the value of contractors' services, it nevertheless gave the War Department a larger measure of control.[116]

Another significant advance was in the field of engineering. According to one informed estimate, it would take a technical force of 25 to 50 men 5 years to complete preparations—drawings, specifications, bills of materials, and layouts—for a major war construction effort.[117] "Of course," as Frink recalled, "the main trouble was always money." In the summer of 1935, with the help of Colonel Hartman, who had recently become chief of the Construction Branch, G–4, General Guiney was able to secure $55,000 in relief money. "A godsend," Frink called it. Work on the 700-series plans began anew in the fall. In the spring of 1937 revised drawings went to the General Staff, and Hartman had the satisfaction of approving them for the War Department. Although much had been accomplished, the plans were still far from complete.[118]

Meanwhile, an attempt to dilute the already weak authority of the Constructing Quartermaster came to nothing. Who would build for Ordnance and Chemical Warfare? On this issue opinions differed. The view of the using services was expressed by a Chemical Warfare officer in September 1934: "Control of construction facilities through a centralized point in time of war would break down of its own weight. All our plans are built around decentralized operations."[119] Six months later Ordnance made a bid to handle its own construction: Colonel Harris proposed that the using service appoint the officers who would direct the work.[120] Quartermaster officers opposed this change as a violation of the National Defense Act. Writing to the Assistant Secretary, Colonel Frink explained:

> This law . . . was brought about by the chaotic conditions existing in the early stages of the World War where . . . valuable time was lost, much confusion created, and greatly increased costs were directly attributable to the systems of control and supervision advocated in the proposed changes.[121]

There the matter rested.

The trend appeared to be in the right direction. On becoming Chief of Staff in October 1935, General Malin Craig reviewed the M-day plans and ordered a complete revision. By early 1936 a three-man committee, headed by Colonel Hartman, was at work restudying the problem of emergency shelter. Extremely critical of decentralization, the Hartman committee received strong support from corps area commanders, who held that the War Department's "makeshift" policy of using racetracks, fairgrounds,

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[116] Ltr, Harris to Bash, 16 Aug 35. QM 160 II. The contract forms are in QM 160 (Constr Contract) and QM 160 (Evaluated Fee Constr Contract).

[117] Memo, H. L. Burt for TQMG, 16 Jan 26. QM 381 (Policies, Precedents, etc.) 1925–40.

[118] (1) Answers to Questionnaire, Frink to authors, 22 Apr 64. (2) Memo, G–4 for CofS, 8 Jul 35. G–4/20052–55. (3) Ltr, TQMG to TAG, 24 Apr 37, and 1st Ind, 5 May 37. QM 600.1 (Mobl) 1936.

[119] Min of Mtg in Plng Br OASW, 11 Sep 34. G–4/20052–55.

[120] Draft of Amendment 1 to Plng Br Circ 3, 22 Mar 35. QM 600.1 (1918–41).

[121] Memo, Frink for ASW, 23 Apr 35. QM 600.1 (1918–41).

and public buildings was not feasible.[122] The committee's stand for centralization would be reflected, though faintly, in later mobilization plans. Louis A. Johnson, who succeeded Woodring as Assistant Secretary of War in June 1937, gave new impetus to industrial planning. In collaboration with his executive, Col. James H. Burns—"the finest officer in the U.S. Army," in Johnson's words[123]—the new Assistant Secretary tried to get rearmament rolling. During his first year in office, he traveled 50,000 miles, preaching the gospel of preparedness.[124]

Under Johnson's leadership, progress on the industrial front was good. With the co-operation of DuPont and other armaments manufacturers, the Chiefs of Ordnance and Chemical Warfare selected sites and developed typical plans for plants to be built in an emergency. The setting up of a Wilmington office in 1937 enabled the Ordnance Department to maintain close liaison with DuPont engineers.[125] Guidelines for future plant construction appeared in the War Construction Plan of 1937, which was based on the most recent edition of IMP, published in 1936. Under the construction plan, the number of new plants would be held to the minimum and such building as was necessary would be done by industry under the supervision of the using services.[126] The plan thus reaffirmed the Army's faith in the war potential of private enterprise. Johnson's greatest contributions were not to construction planning but to production. It was largely because of his efforts that the War Department was able to encourage industrial preparations for war, through a program of production studies and educational orders in the late 1930's.[127]

The result of General Craig's 1936 directive, the Protective Mobilization Plan (PMP) of 1938 envisioned a moderate-sized, balanced force for the defense of U.S. territory.[128] Emphasizing the purely defensive purpose of the plan, Secretary Woodring observed:

> In general, the protective mobilization plan visualizes in the event of a major war immediate employment of an initial protective force of approximately 400,000 men. This force will comprise existing units of the Regular Army and National Guard . . . . Under the protection of this initial defensive force there will be progressively mobilized, trained, and equipped such larger national armies as the defense of the United States demands.[129]

To be ready eight months after M-day was a force of a million men. Plans for full-scale mobilization of a 4-million-man army remained somewhat nebulous. PMP contemplated virtually no construction. Regular Army divisions would assemble at home stations; National Guard divisions at state summer camps. The men would live in existing barracks

[122] (1) Kreidberg and Henry, *History of Military Mobilization*, p. 475. (2) WDGS SO 5, 7 Jan 36. (3) Remarks of Col Hartman at G–1 Conf, 4–16 May 36. AG 381 (7CA GMP–Gen). (4) AG 381 (7–7–33).

[123] Interv with Louis A. Johnson, 9 May 56.

[124] Annual Rpt of ASW, 1938, p. 19.

[125] Harry C. Thomson and Lida Mayo, *The Ordnance Department: Procurement and Supply*, UNITED STATES ARMY IN WORLD WAR II (Washington, 1960), pp. 11–12.

[126] Planning Br OASW, War Construction Plan, 1937, pp. 15–16. EHD Files.

[127] (1) Thomson and Mayo, *Procurement and Supply*, pp. 19–21. (2) R. Elberton Smith, *The Army and Economic Mobilization*, UNITED STATES ARMY IN WORLD WAR II (Washington, 1959), pp. 61–65. (3) Col. H. K. Rutherford, "Educational Orders," *Army Ordnance*, November–December 1939, 162ff.

[128] For a detailed discussion of PMP see Kreidberg and Henry, *History of Military Mobilization*, ch. XIV.

[129] *Report of the Secretary of War, 1938*, p. 2.

and in tents. Corps area commanders would provide tent floors, kitchens, and utilities. Moving overseas one month after M–day, the initial protective force would vacate shelter which would then be occupied by successive groups of men.[130] Whether a large-scale construction effort would be undertaken in later stages of mobilization was left up in the air. The plan read:

> The acquisition of additional land and the construction of cantonments, or provision of housing facilities, for troops and installations not included in the Protection Mobilization Plan but which may be required at a later period is a function of The Quartermaster General and will be provided as directed by the War Department. He will maintain standard plans for buildings, and groups of buildings, and will so draw his plans that he will be able to undertake construction by 30 M if so ordered.[131]

After the sidetracking of General Seaman in the summer of 1938, Hartman fell to work on the plans for war construction. Securing $63,000 from WPA, he hired a staff to complete the 700 series drawings. Using some $200,000 in PWA money, he let contracts for a new building at Fort Myer, Virginia; ostensibly a warehouse, this structure was designed to hold a large emergency force of engineers and draftsmen. With the help of the Air Corps, he obtained aerial mosaics to supplement the division's collection of post maps, some of which were hopelessly out of date.[132] Meantime, he charted the M–day organization and considered ways to streamline contracting methods. In pushing these preparations, Hartman faced several obstacles. One was Seaman, who scornfully referred to the mobilization structures as "cigar boxes,"[133] and who failed to foresee another war.[134] A second was the lack of requirements. With no idea how many units of what type and size might someday have to be housed, Hartman framed his typical layouts around the battalion. He later explained:

> In the plans that I formulated I conceived of block units each complete with water, sewage, housing, etc. These block units would care for roughly a battalion of men and could be modified for varying type units and multiplied for larger units. In addition, there were plans for special type installations. I believed, in general, that it was much easier to modify an existing detail plan than it was to begin from scratch on a new one.[135]

During Hartman's stay in the division, the plans progressed steadily. But whether they would ever be put to use no one knew.

A vast program of military construction to be undertaken on or before M-day—the War Department's plans did not foresee this eventuality. Prophets who foretold such a program and who warned that construction would be the controlling factor in mobilization were little honored. Nevertheless, their vision was clear. In Biblical imagery, the stone which the builders rejected would become the headstone of the corner.

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[130] Testimony of Gen Tyner, 7 Aug 41. In Truman Comm *Hearings*, Part 7, pp. 1994–97.

[131] The Protective Mobilization Plan, 1939, sec. V, p. 11. AG 381 (10–31–38) (Misc) C–M.

[132] (1) QM 600.1 (Funds—Work Projects) II. (2) Memo, Maj Arthur R. Wilson for Budget and Legis Plng Br WDGS, 4 Oct 38. G–4/29778. (3) Interv with Mr. Leisenring, 5 Jun 57. (4) QM 600.92 1941.

[133] Interv with Gen A. Owen Seaman, 2 Oct 57.

[134] Testimony of Gen Seaman, 7 Aug 41. In Truman Comm *Hearings*, Part 7, p. 2021.

[135] Statement of Gen Hartman, 5 Jul 55, p. 1.